

REMARKS

In the Office action, claims 1-3, 5, and 6 were rejected under 35 U.S.C. § 102(e) as anticipated by Liu et al (US 6,638,867), claims 4 and 7 were rejected as unpatentable over Liu et al. in view of Stumborg et al. (US 6,077,775), and claim 8 was rejected as unpatentable over Liu et al. in view of Lee (US 6,551,856). In light of the forgoing amendments and the following remarks, reconsideration of this application is respectfully requested.

Claim 1, as amended, recites, *inter alia*, a semiconductor device having an alloy layer formed on a metal line exposed through a pad, wherein the alloy layer is formed by a heat treatment at a contacting surface between the metal line and a metal having a melting point of 1000°C or less.

Liu et al. is directed to a method for forming a top interconnection level and bonding pads on an integrated circuit chip. Liu et al. teach, “[a] conductive layer 58 is deposited over the etch stop layer 56 ... [and] ... may be formed of ... aluminum alloy” (col. 6, lines 34-39). However, Liu et al. does not teach or disclose that an alloy layer may be formed by a heat treatment at a contacting surface between the metal line and a metal having a melting point of 1000°C as recited in claim 1. To the contrary, Liu et al. disclose that a conductive layer, which may be an aluminum alloy, may be deposited over the etch stop layer 56. In other words, the aluminum alloy has already been formed at the time that it is deposited over the etch stop layer 56. In fact, there would be no need for Liu et al. to perform a heat treatment to form an alloy layer at the contacting surfaces after the aluminum alloy has already been formed. In addition, neither Stumborg et al. nor Lee overcome the above-noted deficiency. Thus, because Liu et al. fail to disclose

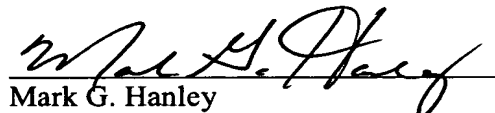
each and every element of claim 1, this claim cannot be anticipated thereby. Accordingly the applicant submits that claim 1 and claims 2-8 dependent thereon are now in condition for allowance.

If, for any reason, the examiner is unable to allow the application in the next official action, the examiner is encouraged to telephone the undersigned attorney at the telephone number listed below.

Respectfully submitted,

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